CLAIMS

That which is claimed is:

1. A thermoplastic comprising at least one small particle size nucleator compound conforming conforming to the structure of Formula (I)

(I)

wherein R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, and R₁₀ are individually selected from the group consisting of hydrogen, C₁-C₉ alkyl, hydroxy, C₁-C₉ alkoxy, C₁-C₉ alkyleneoxy, amine, and C₁-C₉ alkylamine, halogen, phenyl, alkylphenyl, and geminal or vicinal carbocyclic having up to nine carbon atoms, R' and R" are the same or different and are individually selected from the group consisting of hydrogen, C₁-C₃₀ alkyl, hydroxy, amine, polyamine, polyoxyamine, C₁-C₃₀ alkylamine, phenyl, halogen, C₁-C₃₀ alkoxy, C₁-C₃₀ polyoxyalkyl, C(O)-NR₁₁C(O)O-R", and C(O)O-R", wherein R₁₁ is selected from the group consisting of C₁-C₃₀ alkyl, hydrogen, C₁-C₃₀ alkoxy, and C₁-C₃₀ polyoxyalkyl, and wherein R" is selected from the group consisting of hydrogen, a metal ion (such as, without limitation, Na⁺, K⁺, Li⁺, Ag⁺ and any other monovalent ions), an organic cation (such as ammonium as one non-limiting example), polyoxy-C₂-C₁₈-alkylene, C₁-C₃₀ alkyl, C₁-C₃₀ alkylene, C₁-C₃₀

 C_{30} alkyleneoxy, a steroid moiety (for example, cholesterol), phenyl, polyphenyl, C_1 - C_{30} alkylamine; wherein at least one of R' and R" is either C(O)- $NR_{11}C(O)O$ -R" or C(O)O-R", wherein if both R' and R" are C(O)O-R" then R" both R' and R" may be combined into a single bivalent metal ion (such as Ca^{2+} , as one non-limiting example) or a single trivalent metal overbase (such as Al-OH, for one non-limiting example), and at least one anticaking agent.

2. The formulation of Claim 1 wherein said small particle size nucleating compound conforms to the structure of Formula (II)

(II)

$$\begin{array}{c|c}
R_{10} & R_{9} & \bigcirc & \bigcirc & \bigcirc \\
R_{7} & R_{8} & R_{1} & \bigcirc & \bigcirc & \bigcirc \\
R_{8} & R_{1} & \bigcirc & \bigcirc & M_{1}
\end{array}$$

wherein M₁ and M₂ are the same or different and are independently selected from the group consisting of metal or organic cations or the two metal ions are unified into a single metal ion (bivalent, for instance, such as calcium, for example), and R₁, R₂, R₃, R₄, R₅, R₆, R₇, R₈, R₉, and R₁₀ are individually selected from the group consisting of hydrogen, C₁-C₉ alkyl, hydroxy, C₁-C₉ alkoxy, C₁-C₉ alkyleneoxy, amine, and C₁-C₉ alkylamine, halogen, phenyl, alkylphenyl, and geminal or vicinal carbocyclic having up to 9 carbon

atoms. Preferably, the metal cations are selected from the group consisting of calcium, strontium, barium, magnesium, aluminum, silver, sodium, lithium, rubidium, potassium, and the like.

- 3. The formulation of Claim 1 wherein said metal or organic cation is a metal cation selected from the group consisting of Group I and Group II metal ions.
- 4. The formulation of Claim 3 wherein said metal cation is selected from the group consisting of sodium, potassium, calcium, lithium, rubidium, barium, magnesium, and strontium, silver, zinc, aluminum.
- 5. The formulation of Claim 4 wherein said metal cation is sodium.
- 6. The thermoplastic of Claim 1 wherein said anticaking agent is selected from the group consisting of silica gel, talc, dihydrotalcite, metal carboxylic acids, and any mixtures thereof.
- 7. The thermoplastic of Claim 6 wherein said anticaking agent is a silica gel.
- 8. The thermoplastic article of Claim 1 wherein said thermoplastic comprises a polyolefin.

9. The thermoplastic article of Claim 2 wherein said thermoplastic comprises a polyolefin.

- 10. The thermoplastic article of Claim 6 wherein said thermoplastic comprises a polyolefin.
- 11. The thermoplastic article of Claim 8 wherein said polyolefin is a polypropylene.
- 12. The thermoplastic article of Claim 9 wherein said polyolefin is a polypropylene.
- 13. The thermoplastic article of Claim 10 wherein said polyolefin is a polypropylene.